

REMARKS

Claims 1-2 were originally presented in the subject application. Claims 1 and 2 were amended, and claims 3-8 added, in a response dated September 25, 2007. Claims 1 and 3 have hereinabove been amended. No claims have herein been added or canceled. Therefore, claims 1-8 remain in this case.

The addition of new matter has been scrupulously avoided. In that regard, support for the common amendment to the claims can be found, for example, in claim 1 as originally filed.

Applicants respectfully request reconsideration and withdrawal of the sole ground of rejection.

35 U.S.C. §103 Rejection

The final Office Action rejected claims 1-4 and 6-8 under 35 U.S.C. §103(a), as allegedly obvious over “Applicants Admitted Prior Art” (U.S. Patent Application Serial No. 10/711,034) in view of Nakamura et al. (U.S. Patent No. 5,920,554). Applicants respectfully, but most strenuously, traverse this rejection.

Amended claim 1 recites a method for IDMA signal transmission. The method comprises assigning a code to each user, where the code can be the same or different for different users and of the same or different rates for different users. The method further comprises encoding a source data sequence to create a coded source data sequence for each user using an encoder assigned to that user, and interleaving each coded source data sequence so as to modify an order of the coded source data sequence to produce an interleaved data sequence, wherein interleaved data sequences from different users are distinguished by using different interleaving schemes. The method further comprises assigning a pre-calculated power level to each user, wherein the power level is different for at least some users, and transmitting an IDMA signal comprising the interleaved data sequence for each user using the assigned pre-calculated power level for that user.

Against the first part of the first assigning aspect of claim 1, the final Office Action cites to numbered paragraph 0005 of the application. However, Applicants submit that the cited section addresses aspects of CDMA signal transmission, and not IDMA signal transmission as claimed.

Applicants submit that the differences between CDMA and IDMA signal transmission are non-trivial. For example, in CDMA techniques power control methods are generally based on the objective of controlling the arrival power levels so that they are equal for all users. To achieve this procedure, different users adopt different transmit power levels so that the arrival power levels become the same after the attenuation effect of the various channels. In contrast, the present application relates to what may be described as “unequal power control” in which the arrival power is controlled to give a profile. This profile specifies the arrival power level for different users and such levels are unequal for different users. See step (d) of claims 1 and 3.

The Advisory Action indicates that no weight was given to “IDMA signal transmission” in claim 1, as the phrase appears only in the preamble. However, Applicants submit that the type of signal would be understood by one skilled in the art, and is inherent in the steps of claim 1 and the signal components produced, that what is transmitted is an IDMA signal.

Nonetheless, Applicants have amended claim 1 to expressly recite an IDMA signal transmission in the body of the claim. However, Applicants do not view this as a substantive amendment, since it was already inherent in the claim previously as remarked above.

As another example, against the second portion of the first assigning aspect of claim 1, i.e., “...wherein said code can be ... of the same or different rates for different users,” the final Office Action cites to numbered paragraph 0023 of the present specification and simply alleges it is well known that rates can be different for different users. The Advisory Action also cites to paragraphs 11 and 13 of the published application.

However, Applicants do not acquiesce to the noted allegation. The Advisory Action points to sections of the present application that refer to CDMA signal transmission, and not IDMA transmission. Should the allegation be maintained, Applicants request proof in the form

of properly cited prior art or other properly introduced evidence related to IDMA signal transmission.

The final Office Action indicates that the second assigning aspect and the transmitting aspect of claim 1 are not disclosed in “Applicants’ Admitted Prior Art”; instead, the final Office Action cites to Nakamura against these aspects.

As an initial matter, however, similar to “Applicants’ Admitted Prior Art,” Applicants point out that Nakamura is directed to CDMA signal transmission (e.g., see title and Field of the Invention), and not the claimed IDMA signal transmission. As remarked above, these are different types of signal transmission, which difference affects what is meant by “Power Control.” Further, Applicants submit it would not be obvious to one skilled in the art to port power management techniques from a CDMA scheme, as in Nakamura, to an IDMA scheme as in the present invention. The final Office Action presents no evidence that porting over such techniques would even work, with or without other changes not disclosed, taught or suggested, much less porting the specific power management techniques.

In the following remarks regarding the affect of the two signal transmission schemes on power control, the term “transmit power” refers to the power level measured at the output of a transmitter, and the term “arrival power” refers to the power level measured at the input to a receiver. It should be noted that for the same user the transmittal and arrival power levels are usually different since the channel will introduce attenuation. It should also be noted that different users will usually experience different channel attenuations. Moreover, Applicants submit Nakamura does not explain the objective of any power control, though given Nakamura’s applicability to CDMA techniques, Applicants submit it is reasonable to assume that any power control that may be implied is such that the arrival power is equal for all users as in conventional CDMA techniques.

In contrast, as noted above, the present application relates to “unequal power control” in which the arrival power is controlled to give a profile. This profile specifies that arrival power level for different users and such levels are unequal for different users. See Step (d) of claims 1 and 3.

Therefore, for at least the reasons noted above, Applicants submit that claim 1 cannot be made obvious over "Applicants' Admitted Prior Art" in view of Nakamura.

Claim 3 includes aspects similar to those argued above with respect to claim 1. Thus, Applicants submit that the remarks above apply equally to claim 3. Therefore, Applicants submit that claim 3 cannot be rendered obvious over "Applicants' Admitted Prior Art" in view of Nakamura.

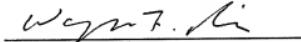
CONCLUSION

Applicants submit that the dependent claims not specifically addressed herein are allowable for the same reasons as the independent claims from which they directly or ultimately depend, as well as for their additional limitations. In addition, Applicants do not acquiesce to any "well-known in the art" or similar allegations that may have been made in the final Office Action. Further, unless specifically set forth otherwise, Applicants request proof of any such allegations in the form of properly cited prior art or other allowed evidence.

For all the above reasons, Applicants maintain that the claims of the subject application define patentable subject matter and earnestly request allowance of claims 1-8.

If a telephone conference would be of assistance in advancing prosecution of the subject application, Applicants' undersigned attorney invites the Examiner to telephone him at the number provided.

Respectfully submitted,



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Dated: June 12, 2008.

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